

ABSTRACT

An HTB gas and a disilane gas are introduced into a process chamber (1), and a hafnium silicate film is formed on a silicon substrate (W) by CVD. The film is formed while controlling the substrate temperature by a heater (5) embedded in a susceptor (2) supporting the substrate. The substrate temperature during film formation is controlled not less than the temperature at which HTB is decomposed into hafnium hydroxide and isobutylene and less than the autolysis temperature of the disilane gas, preferably not less than 350°C and not more than 450°C.